

**EXISTING SIGNALS TO REMAIN**

1,2, 3,4,7,8, 5,6 9,10,11,12

**PROPOSED LED SIGNALS**

13,14,15,16, 17,18,19,20

**EXISTING SIGNALS TO BE REMOVED**

13a,14a,15a,16a, 17a,18a,19a,20a

**PROPOSED SIGNS**

22, 23, 28, 29, 34, 40

**SHIELD ASSEMBLY**

(30"x51") (48"x75") (30"x51") (48"x75") (24"x51") (24"x51")

**EXISTING SIGNS TO REMAIN**

21,25, 27,31, 33,37, 39,43

**EXISTING SIGNS TO BE REMOVED**

35a,38a,41a,44a

**PROPOSED ACCESSIBLE PUSHBUTTON AND SIGN**

R10-4(1)MOD (9"x15") R10-4(1)MOD (9"x15") R10-4(1)MOD (9"x15") R10-4(1)MOD (9"x15")

**PROPOSED VIDEO DETECTION CAMERA**

a,b,c,d,e,f

**NEMA PHASING**

01, 02, 04, 04 & 08 ALT., 05, 06, 08, FLASHING OPERATION

**GENERAL NOTES**

1. MAINTENANCE OF TRAFFIC SHALL BE HANDLED BY THE CONTRACTOR UTILIZING THE MSHA STANDARD PLATES FOR TRAFFIC CONTROL.
2. THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE, RAMP, AND PUSHBUTTON LOCATIONS PRIOR TO INSTALLATION.
3. ALL EXISTING TRAFFIC SIGNAL EQUIPMENT REMOVED SHALL BECOME THE PROPERTY OF THE SIGNAL CONTRACTOR UPON COMPLETION OF THE SIGNAL MODIFICATION.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ROUTING AND PROPERLY LABELING ALL SIGNAL CABLES. THE SHA SIGNAL SHOP WILL BE RESPONSIBLE FOR ALL INTERNAL CABINET WIRING.
5. THE CONTRACTOR IS TO REMOVE THE BRICK/CONCRETE SIDEWALK AND REPLACE IT TO ITS ORIGINAL LAYOUT.
6. VIDEO CAMERA LOCATION / ALIGNING SHALL BE COORDINATED WITH THE SHA ENGINEER.
7. THE CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES PRIOR TO INSTALLING PROPOSED SIGNAL EQUIPMENT. IF ANY UTILITY CONFLICTS SHOULD ARISE THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER.
8. ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS, HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS, TO MEET CLEARANCES AS SPECIFIED IN MD 816.03, MD 818.01, MD 818.02, MD 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.
9. THE CONTRACTOR SHALL CENTER THE PROPOSED CROSSWALKS WITH THE PROPOSED RAMPS.
10. ALL PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE TO THE MSHA STANDARDS.
11. ALL ACCESSIBLE PEDESTRIAN EQUIPMENT SHALL BE DELIVERED TO MONTGOMERY COUNTY FOR TESTING AND PROGRAMMING PRIOR TO INSTALLATION. CONTACT MR. KEITH LORD AT 301-279-1291 TO COORDINATE.
12. WITHIN 36 IN. OF UNDERGROUND UTILITY LOCATIONS, THE CONTRACTOR SHALL BE REQUIRED TO EXCAVATE FOR FOUNDATION AND CONDUIT BY HAND.
13. SEE GENERAL INFORMATION SHEET FOR PEDESTAL POLE AND APS DETAIL LAYOUT.
14. THE CONTRACTOR SHALL CONTACT MCDPW&T TMC AT 240-777-2100, 72 HOURS PRIOR TO MARK UNDERGROUND SIGNAL EQUIPMENT.
15. THE CONTRACTOR MUST COORDINATE THE PROPOSED APS PEDESTAL POLE LOCATIONS WITH THE CONSTRUCTION OF THE PROPOSED SIDEWALK RAMPS. REFER TO DETAIL SHEETS IN THE IFB FOR PROPOSED RAMP STANDARDS, STATIONS, AND OFFSETS.
16. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SEC. 4E.09 AND FIG. 4E.2; AND THE NCHRP PUBLICATION, "ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE." IF NOT MET, THE CONTRACTOR IS TO STOPWORK ON PUSHBUTTON LOCATIONS UNTIL A DESIGN WAIVER IS OBTAINED, APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.

**CONSTRUCTION DETAILS**

1. INSTALL ONE 2 IN. 90 DEGREE BEND IN THE EXISTING BASE MOUNTED CABINET
2. USE EXISTING HANDHOLE
3. USE EXISTING CONDUIT
4. REMOVE EXISTING SIGN AND PEDESTRIAN SIGNAL HEADS
5. REMOVE EXISTING SIGN AND PEDESTRIAN SIGNAL HEADS AND INSTALL A NEW LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ACCESSIBLE PEDESTRIAN PUSHBUTTON, AND SIGN R10-4(1)MOD "PUSH BUTTON TO CROSS UNIVERSITY BOULEVARD"
6. INSTALL A 10 FT. BREAKAWAY PEDESTAL POLE WITH FOUNDATION, LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ACCESSIBLE PEDESTRIAN PUSHBUTTON, AND SIGN R10-4(1)MOD "PUSH BUTTON TO CROSS GEORGIA AVENUE OR UNIVERSITY BOULEVARD" (NOTE: 1-3 IN. PVC 90 DEGREE BEND) (SEE NOTE 15)
7. INSTALL 3 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - TRENCHED (SEE NOTE 15)
8. INSTALL 2 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT (SLOTTED) FOR PROPOSED TELEPHONE SERVICE. THE CONTRACTOR SHALL CAP, MARK AND LEAVE A 1 FT. STUB WITH PULL STRING AT BASE OF UTILITY POLE FOR USE BY OTHERS (SEE NOTE 5)
9. INSTALL VIDEO DETECTION CAMERA ON EXISTING MAST ARM
10. INSTALL 12 IN. WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKING FOR CROSSWALK
11. INSTALL 24 IN. WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKING FOR STOPLINE
12. ABANDON EXISTING LOOP DETECTOR
13. INSTALL OVERHEAD SIGN
14. REMOVE ELECTRICAL HANDHOLE
15. INSTALL 2-4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - SLOTTED (SEE NOTE 5)
16. ABANDON EXISTING CONDUIT - CAP AT NEAREST HANDHOLE
17. CONSTRUCT A 5 FT. x 5 FT. CONCRETE PAD

**UTILITY LEGEND**

E - E - ELECTRIC CABLES SD - SD - STORM DRAIN  
A - A - AERIAL CABLES G - G - GAS MAIN  
T - T - TELEPHONE CABLES W - W - WATER MAIN  
F - F - FIBER-OPTIC S - S - SEWER MAIN

**STV Incorporated**

engineers/architects/planners/construction managers

7125 Ambassador Road Baltimore, MD 21244-2722 (410) 944-9112

**TRAFFIC SIGNALIZATION PLAN**

SCALE 1"=20' DATE 03/27/20 CONTRACT NO. \_\_\_\_\_

DESIGNED BY ASR COUNTY MONTGOMERY  
DRAWN BY TEL LOGMILE 15009703.47  
CHECKED BY RLM T.I.M.S. NO. H326  
F.A.P. NO. TOD NO. \_\_\_\_\_

DRAWING NO. TS-211A OF SHEET NO. OF

**APPROVALS**

TEAM LEADER \_\_\_\_\_  
ASST. DIV. CHIEF \_\_\_\_\_  
DIVISION CHIEF \_\_\_\_\_  
OFFICE DIRECTOR \_\_\_\_\_

**REVISIONS**

1. ADD APS, COUNTDOWN PED. 12/2008 SIGNALS, AND VIDEO DETECTION TO ALL APPROACHES. SHA# MD565177

**3/20/07 Addendum #1**

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**MD 97 (GEORGIA AVENUE) AND MD 193 (UNIVERSITY BOULEVARD)**

**STATE OF MARYLAND**  
**DEPARTMENT OF TRANSPORTATION**  
**STATE HIGHWAY ADMINISTRATION**  
**OFFICE OF TRAFFIC & SAFETY**  
**TRAFFIC ENGINEERING DESIGN DIVISION**

**MD 97 (GEORGIA AVENUE) AND MD 193 (UNIVERSITY BOULEVARD)**

**TRAFFIC SIGNALIZATION PLAN**

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